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CLAIMS

1. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein the direction along an optical axis of said optical fiber, , is the direction of a high elastic modulus in the resin material at a main portion along at least said optical axis of said optical fiber in said resin case member.

2. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein the direction along an optical axis of said optical fiber, is the direction of a low coefficient of thermal expansion in the resin material at a main portion along at least said optical axis of said optical fiber of said resin case member,.

3. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, a main flowing direction of the resin being substantially parallel with the optical axis of said optical fiber.

4. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein at a main portion along at least an optical axis of said optical fiber in said resin case member, the orientation of a molecular chain of the resin is substantially parallel with the optical axis of said optical fiber.

5. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein said resin case member is formed of a thermoplastic resin, and the direction along an optical axis of said optical fiber, is the direction of a high elastic modulus in the resin material at a main portion along at least the optical axis of said optical fiber of said resin case member.

6. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein said resin case member is formed of a thermoplastic resin, and the direction along an optical axis of said optical fiber is the direction of a low thermal expansion coefficient in the resin material of a main portion along at least the optical

axis of said optical fiber in said resin case member.

7. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein said resin case is formed of a thermoplastic resin, and when the resin case is formed, the resin case is molded so that a main flowing direction of the resin is substantially parallel with an optical axis of said optical fiber.

8. An optical module comprising an optical device, an optical fiber optically coupled to said optical device, and a resin case member having at least said optical device and said optical fiber mounted thereon, wherein at a main portion along at least an optical axis of said optical fiber in said resin case member, an orientation of a molecular chain of the resin is substantially parallel with the optical axis of said optical fiber.

9. The optical module according to any one of claims 1 to 8, wherein said optical device and at least a portion of said optical fiber are encapsulated with a transparent resin.

10. An optical module comprising an optical device, and an optical fiber optically coupled to said optical device, wherein a main flowing direction of the resin is substantially parallel with an optical axis of said optical

fiber to mold the resin, and then said resin is solidified to package said optical device and at least a part of said optical fiber.

11. The optical module according to claim 10, wherein said resin comprises a thermosetting resin.

12. The optical module according to any of claims 10 and 11, wherein said optical device and the part of said optical fiber is encapsulated on a predetermined member with a transparent resin, a main flowing direction of the resin is substantially parallel with an optical axis of said optical fiber to mold the resin, and then said resin is solidified and packaged, including at least said predetermined member.

13. A method for manufacturing an optical module comprising an optical device and an optical fiber optically coupled to said optical device, comprising the steps of: making a main flowing direction of the resin substantially parallel with the optical axis of said optical fiber to mold the resin; and then solidifying said resin to package a part of said optical device and at least a portion of said optical fiber.

14. The method for manufacturing an optical module according to claim 13, wherein said optical device and the part of said optical fiber is coated on a predetermined member with a transparent resin, a main flowing direction

of the resin is substantially parallel with an optical axis of said optical fiber to mold the resin, and then said resin is solidified and packaged, including at least said predetermined member.

15. A method for manufacturing an optical module comprising the steps of: preparing at least an optical device, an optical fiber optically coupled to said optical device, a substrate having said optical device and said optical fiber mounted thereon, and a lead frame electrically connected to said optical device; and flowing a thermosetting resin generally parallely with an optical axis of said optical fiber to effect transfer molding with inserting said substrate and said lead frame;.

16. An optical communication apparatus comprising at least an optical module and an assembly substrate on which said optical module is mounted, said optical module having at least an optical device, an optical fiber optically coupled to said optical device, and a package encasing said optical device and at least a part of said optical fiber, said package being a package molded by flowing a resin substantially parallely with the optical axis of said optical fiber.

17. An optical communication apparatus comprising at least an optical module and an assembly substrate on which said optical module is mounted, said optical module

having at least an optical device, an optical fiber optically coupled to said optical device, and a package encasing therein said optical device and at least a part of said optical fiber, the direction of along an optical axis of said optical fiber being the direction of high elastic modulus in the resin material at a main portion along at least the optical axis of said optical fiber in said package.

18. An optical communication apparatus comprising at least an optical module and an assembly substrate on which said optical module is mounted, said optical module having at least an optical device, an optical fiber optically coupled to said optical device, and a package encasing therein said optical device and at least a part of said optical fiber, the direction of along an optical axis of said optical fiber being the direction of a low thermal expansion coefficient in the resin material at a main portion along at least the optical axis of at least said optical fiber in said package.

19. An optical communication apparatus comprising at least an optical module and an assembly substrate on which said optical module is mounted, said optical module having at least an optical device, an optical fiber optically coupled to said optical device, and a package encasing therein said optical device and at least a part of

said optical fiber, the direction of along the optical axis of said optical fiber being the direction of orientation of a molecular chain in the resin material at a main portion along at least said optical axis of at least said optical fiber in said package.